

AMENDMENTS TO THE SPECIFICATION

Please replace the first paragraph on page 1 with the following amended paragraph:

RELATED APPLICATIONS

This application is a continuation-in-part of U.S. Application No. 10/382,082, filed March 3, 2003, (now abandoned), and a continuation-in-part of International Application No. PCT/US03/06731, which designated the United States and was filed on March 3, 2003. U.S. Application No. 10/382,082 and International Application No. PCT/US03/06731 claims the benefit of U.S. Provisional Application No. 60/360,851, filed March 1, 2002, (now abandoned) and U.S. Provisional Application No. 60/440,411, filed January 15, 2003 (now abandoned). The entire teachings of the above applications are incorporated herein by reference.

Please replace the paragraph beginning on page 30, line 26 with the following amended paragraph:

FIGS. 1A and 1B are graphs illustrating the saturation binding curves of binding peptide/neutravidin-HRP complexes. FIG. 1A illustrates the saturation binding curve for SEQ ID NO:264 and SEQ ID NO:294. FIG. 1B illustrates the saturation binding curve for SEQ ID NO:277 and SEQ ID NO:356. All peptides had a C-terminal biotin and JJ spacer (di(8-amino-3,6-dioxaoctanoic acid)).

Please replace the paragraph beginning on page 33, line 27 with the following amended paragraph:

FIG. 22 is a graph showing the results of testing of KDR peptides in HUVEC proliferation assay. A: D6; B: SEQ ID NO:277; C: SEQ ID NO:377 (AEGTGDHLHCYFPWVCSLDPGPEGGGK SEQ ID NO.:377; negative control); F: SEQ ID NO:377; negative control.

Please replace the paragraph beginning on page 152, line 1 with the following amended paragraph:

Experiment A

Preparation of ~~m-RNA~~ mRNA & 5' RACE ready cDNA library

Please replace the paragraph beginning on page 152, line 23 with the following amended paragraph:

Cloning of s-KDR into TOPOII Vector

In order to clone s-KDR, a 5' oligo (G ATG GAG AGC AAG GTG CTG CTG G) (SEQ ID NO:358) and a 3' oligo (C CAA GTT CGT CTT TTC CTG GGC A) (SEQ ID NO:359) were used. These were designed to amplify the complete extracellular domain of KDR (~2.2 kbps) from the 5' RACE ready cDNA library (prepared above) using polymerase chain reaction (PCR) with pfu polymerase (Stratagene, cat. # 600135). The PCR reaction was done in total volume of 50 µl and the reaction mix contained 2 µl 5' RACE ready cDNA library, 1 µl 5' oligo (10 µM), 1 µl 3' oligo (10 µM), 5 µl 10X PCR buffer [PCR buffer (200 mM Tris-HCl pH 8.8, 20 mM MgSO₄, 100 mM KCl, 100 mM (NH₄)₂SO₄) supplied with pfu enzyme plus 1% DMSO and 8% glycerol], 1 µl dNTP mix (10 mM) and 40 µl ddH₂O. The PCR reaction was performed by using a program set for 40 cycles of 1 minute at ~~94°C~~ 94°C, 1 minute at ~~68°C~~ 68°C and 4 minutes at ~~72°C~~ 72°C. The PCR product was purified by extraction with 1 volume of phenol, followed by extraction with 1 volume of chloroform and precipitated using 3 volume of ethanol and 1/10 volume of 3M sodium acetate. The PCR product was resuspended in 17 µl of ddH₂O, the 2 µl of 10X Taq polymerase buffer (100 mM Tris-HCl pH 8.8, 500 mM KCl, 15 mM MgCl₂, 0.01% gelatin) and 1 µl of *Taq* polymerase (Stratagene, cat. # 600131) was added to generate an A overhang to each end of the product. After incubating for 1 hour at ~~72°C~~ 72°C the modified product was cloned directly into a TOPOII vector (Invitrogen, Carlsbad, CA) following the manufacturer's protocol to give TOPO-sKDR. The TOPO vector allows easy cloning of PCR products because of the A-overhang in *Taq* (PCR enzyme)-treated PCR products.

Please replace the paragraph beginning on page 160, line 24 with the following amended paragraph:

Preparation of Peptide/Neutravidin Solutions: 250 μ M stock solutions of biotinylated peptides SEQ ID NOs:264, 294 and control peptide were prepared in 50% DMSO and a 33 μ M stock solution of Neutravidin HRP was prepared by dissolving 2 mg of Neutravidin HRP (Pierce, cat. # 31001) in 1 mL of ddH₂O. Peptide stock solutions were stored at ~~-20°C~~ -20°C, whereas the Neutravidin HRP stock solution was stored at ~~-80°C~~ -80°C. The sequences of the biotinylated peptides are shown above. To prepare peptide/neutravidin HRP complexes, a total 5.36 μ L of 250 μ M biotinylated peptide stock solution (or a mixture of peptide solutions, to give peptide molecules four times the number of avidin HRP molecules) and 10 μ L of 33 μ M Neutravidin HRP were added to 1 mL of M199 medium. This mixture was incubated on a rotator at ~~4°C~~ 4°C for 60 minutes, followed by addition of 50 μ L of soft release avidin-sepharose (50% slurry in ddH₂O) to remove excess peptides and another incubation for 30 minutes on a rotator at ~~4°C~~ 4°C. Finally, the soft release avidin-sepharose was pelleted by centrifuging at 12,000 rpm for 5 minutes at room temperature, and the resulting supernatant was used for the assays. Fresh peptide/neutravidin HRP complexes were prepared for each experiment.

Please replace the paragraph beginning on page 177, line 6 with the following amended paragraph:

Synthesis of ^{99m}Tc-Labeled SEQ ID NO:339

A stannous gluconate solution was prepared by adding 2 mL of a 20 μ g/mL SnCl₂·2H₂O solution in nitrogen-purged 1N HCl to 1.0 mL of nitrogen-purged water containing 13 mg of sodium glucoheptonate. To a 4 mL autosampler vial was added 20-40 μ L (20 - 40 μ g) of SEQ ID NO:339 ligand dissolved in 50/50 ethanol/H₂O, 6-12 mCi of ^{99m}TcO₄⁻ in saline and 100 μ L of stannous glucoheptonate solution. The mixture was heated at ~~100°C~~ 100°C for 22 min. The resulting radiochemical purity (RCP) was 10 - 47% when analyzed using a Vydac C18 Peptide and

Protein column that was eluted at a flow rate of 1 mL/min. with 66% H₂O (0.1% TFA)/34% ACN(0.085% TFA). The reaction mixture was purified by HPLC on a Vydac C18 column (4.6 mm × 250 mm) at a flow rate of 1 mL/min., using 0.1% TFA in water as aqueous phase and 0.085% TFA in acetonitrile as the organic phase. The following gradient was used: 29.5% org. for 35 min., ramp to 85% over 5 min., hold for 10 min. The fraction containing ^{99m}Tc SEQ ID NO:339 was collected into 500 µl of a stabilizing buffer containing 5 mg/mL ascorbic acid and 16 mg/mL hydroxypropyl-α-cyclodextrin in 50 mM phosphate buffer. The mixture was concentrated using a speed vacuum apparatus to remove acetonitrile, and 200 µl of 0.1% HSA in 50 mM pH 5 citrate buffer was added. The resulting product had an RCP of 100%. Prior to injection into animals, the compound was diluted to the desired radioconcentration with normal saline.